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Amendment under 37 C.F.R. §1.114
Serial No. 10/670,384
Attorney Docket No. 031201

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Claim 1. Cancelled.

Claim 2 (Currently Amended): ~~The~~ A non-aqueous electrolyte secondary cell ~~according~~
~~to claim 1, wherein comprising:~~

a positive electrode intercalating and deintercalating lithium ions;

a negative electrode intercalating and deintercalating lithium ions;

a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;

an outer casing can having mounted therein the positive electrode, the negative electrode,

and the non-aqueous electrolyte, and having an opening portion; and

a sealing structure for sealing the opening portion and having a sealing plate;

wherein:

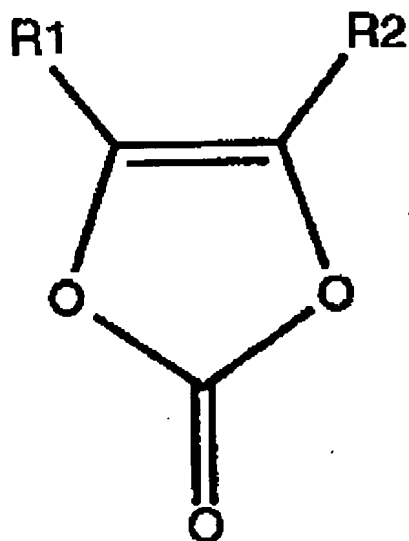
a positive electrode active material contained in the positive electrode is a lithium cobalt compound oxide; and

the positive electrode active material has a bulk density in the positive electrode of 3.3 g/cm³ or more; and

the non-aqueous electrolyte includes a vinylene carbonate compound represented by Chemical Formula 1, a cyclic sulfite compound represented by Chemical Formula 2 or 3, and a

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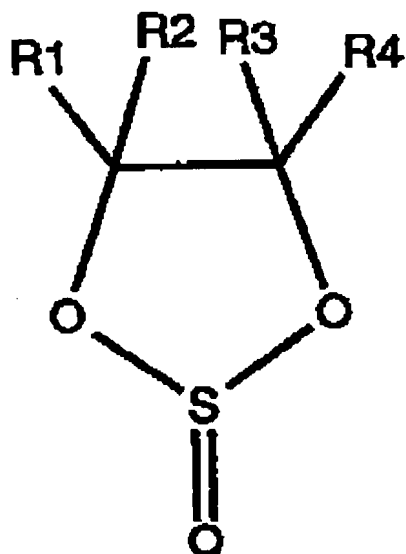
phenylcycloalkane compound, or an alkylbenzene compound having a quaternary carbon directly bonded to a benzene ring,



Chemical Formula 1

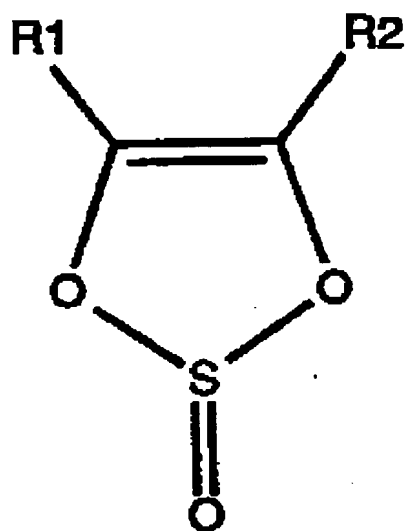
where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less,

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Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less.



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

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Claim 3 (Currently Amended): The non-aqueous electrolyte secondary cell according to claim [[1]] 2, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate derivative is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite derivative is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 4. Cancelled.

Claim 5 (Currently Amended): ~~A~~ The non-aqueous electrolyte secondary cell ~~according to claim 4, wherein comprising:~~

a positive electrode intercalating and deintercalating lithium ions;

a negative electrode intercalating and deintercalating lithium ions;

a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;

an outer casing can having mounted therein the positive electrode, the negative electrode, and the non-aqueous electrolyte, and having an opening portion; and

a sealing structure for sealing the opening portion and having a sealing plate;

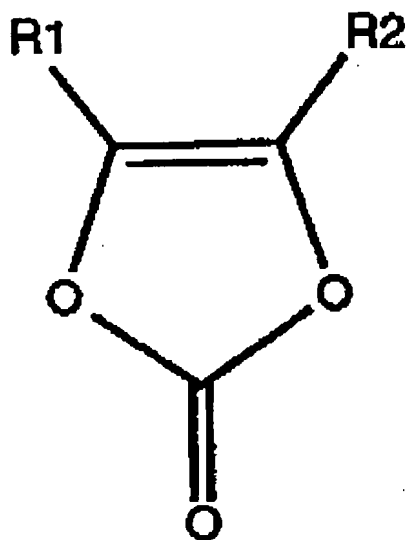
wherein

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a positive electrode active material contained in the positive electrode is a lithium cobalt compound oxide; and

the positive electrode active material has a bulk density in the positive electrode of 3.3 g/cm³ or more; and

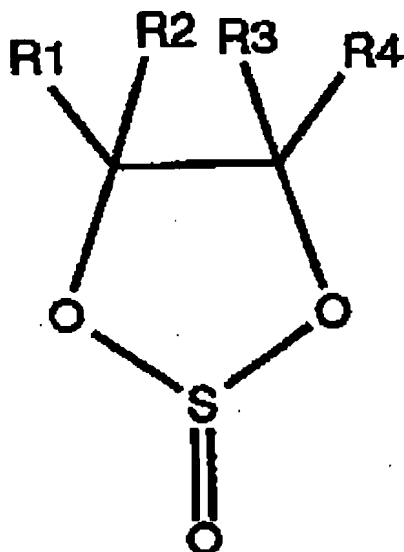
the non-aqueous electrolyte includes a vinylene carbonate compound represented by Chemical Formula 1, a cyclic sulfite compound represented by Chemical Formula 2 or 3, a phenylcycloalkane compound, and an alkylbenzene compound having a quaternary carbon directly bonded to a benzene ring.



Chemical Formula 1

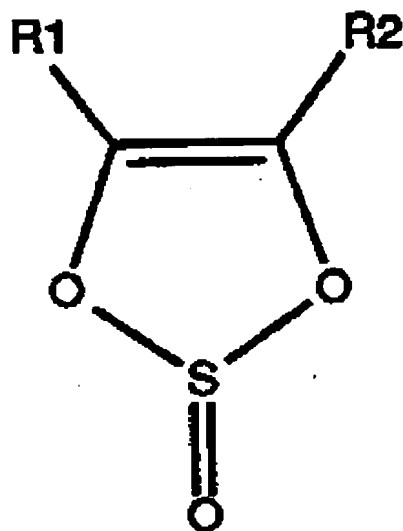
where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

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Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less.



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

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Claim 6 (Currently Amended): The non-aqueous electrolyte secondary cell according to claim ~~[[4]]~~ 5, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate compound is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite compound is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 7 (Currently Amended): The non-aqueous electrolyte secondary cell according to claim ~~[[1]]~~ 2, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite;

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.

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Claim 8 (Currently Amended): The non-aqueous electrolyte secondary cell according to claim [[4]] 5, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite;

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.

Claim 9 (New): The non-aqueous electrolyte secondary cell according to claim 2, wherein:

the non-aqueous electrolyte contains a phenylcycloalkane compound, the amount of the phenylcycloalkane compound being 0.2 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 10 (New): The non-aqueous electrolyte secondary cell according to claim 5, wherein a total amount of the phenylcycloalkane compound and the alkylbenzene compound is 0.2 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.